

Technical Programme

Thursday, 29 August 2024 | 13:45 – 15:30

Best Paper Session

Room: Grand Ballroom, 2/F, New World Millennium Hong Kong Hotel

1. Opioid Crisis and Firm Downside Tail Risks: Evidence from the Options Market
Jie Cao, Yajing Wang, Xintong Zhan and Weiming Zhang
2. Decreasing decay rate of tropical cyclones in response to ocean warming
Mo Zhou and Shuo Wang
3. Achieving ultrahigh strength and ductility in high-entropy alloys via dual precipitation
Jiaming Guo
4. Livelihood, Belief, Life, and Ecology: Unveiling the Warmth Wisdom of Farmers and Herdsmen in the Gra-nang Valley of the Qinghai-Tibet Plateau
Heng Peng
5. Adaptive Debaised SGD in High-dimensional Generalized Linear Models with Streaming Data
Yuanhang Luo, Ruijian Han, Lan Luo, Yuanyuan Lin and Jian Huang
6. Global dynamics of an indirect prey-taxis system with an anti-predation mechanism
Jiawei Chu
7. Multifunctional zeolite film enables stable high-voltage operation of LiCoO₂ cathode
Zezhou Lin and Haitao Huang

Thursday, 29 August 2024 | 15:40 – 17:00

Session S01: Health and Well Being

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Chi-Wai Kan and Sonata Yau

1. Exploring hemodynamic responses and modulating factors during iTBS of the left DLPFC: A concurrent iTBS/fNIRS study
Weili Xia, Minxia Jin, Laidi Kan, Bingbing Zhang, Ping Qin and Georg Kranz
2. Priming the pump? Investigating the effects of priming theta burst stimulation in healthy and subclinically depressed groups
Bingbing Zhang, Laidi Kan, Minxia Jin, Weili Xia, Ping Qin and Georg Kranz
3. Age differences in prosociality: The validation and application of the picture-based measure of prosociality
Duo Li, Yuan Cao, Bryant Hui and David Shum
4. Lower extremity kinematic measurement using markerless motion capturing (MMC) in persons with a stroke: A cross-sectional experimental study
Wing Tung Lam and N.K. Kenneth Fong
5. Transcranial pulse stimulation for the treatment of major depressive disorder: A randomized, double-blind, sham-controlled, pilot trial
Ping Qin, Minxia Jin, Weili Xia, Bingbing Zhang, Laidi Kan, Manwai Chau, Tianze Lin and Georg Kranz

6. The integration of artificial intelligence in the wheelchair fencing classification
Daniel Ky Zheng, Eugene Fu, Pak Ho Sio, Iris Ty Wong, Kwok Lun Man and Arnold YI Wong
7. Does ToM decline with age? A pilot study of developing an age-appropriate ToM assessment tool
Wing Yee Winnie So, Yuan Cao, Yi Wang, Yi Xie, Raymond C.K. Chan and David H.K. Shum
8. Relationships between neurocognition, social cognition, social skills, family support, and vocational function in those with early psychosis and familial risk for psychosis: A pilot cross-sectional study
Yiting Weng, Jingxia Lin and Wing Hong Hector Tsang
9. Effect of physical exercise on incident of falls among people with stroke: A systematic review and meta-analysis
Xun Li, Yuk Kwan Chan, Yiu Lam Tong, Jingwen Zhuang, Fangfei Xiong, Hei Yuen Wan, Ching Hei Wong, Ka Yu Wong, Austen Cheuk Fung Li and Marco Pang
10. Chronic exposure to particulate matter 2.5 (PM2.5) induces cognitive deficit and its relationship with the brain and gut derived metabolites in a mouse model
Akhlai Hussain and Sonata Yau
11. Sex differences in brain excitability revealed by concurrent iTBS/fNIRS
Rebecca Kan, Bella Zhang, Tim Lin, Alvin Tang, Ami Li, Adam Xia, Penny Qin, Minxia Jin, Kenneth Fong, Benjamin Becker, Suk-Yu Yau and Georg Kranz
12. Cortical Activity during Freezing of Gait and Voluntary Stopping in Individuals with Parkinson's Disease: A Protocol of Functional Near-Infrared Spectroscopy Study
Yawen Chen
13. Does Poor Sleep Quality Worsen Static and Dynamic Balance Control in Individuals with Chronic Low Back Pain? A Cross-sectional Study
Daniel Kangyong Zheng, Jeremy R Chang, Frank F Huang, Arnold YI Wong and Xueqiang Wang
14. Psychometric assessment of brief memory and executive test (BMET) for people with stroke: translation and cultural adaptation
Longjun Ren, Thomson Wong and Shamay Ng
15. Task-based fMRI assessment of rTMS over the primary motor cortex in poststroke rehabilitation: a systematic review
Youxin Sui, Jack Jiaqi Zhang and Kenneth Nai Kuen Fong
16. Consequences of Dextran Sulfate Sodium-Mediated Maternal Inflammatory Bowel Disease on Brain Development and Behavior in the Offspring
Jimmy Lam and Ka Ming Cheng
17. Effect of the Chinese Culturally Specific End-of-life Communication Skills Training for Oncology Nurses in Acute Care Settings: A Randomized Controlled Trial
Weilin Chen, Joyce Oi Kwan Chung, Katherine Ka Wai Lam and Alex Molassiotis
18. Development and validation of a clinically explainable machine learning tool for assessing type 2 diabetes risk in prediabetes using a population-based cohort
Jiqiao Lu, Shuya Lu, Yubo Zhao and Lin Yang

19. Data-Independent Acquisition Proteomics Reveals Tear Protein Alterations Associated with Anti-VEGF Therapy Response in Diabetic Macular Edema
Xinyue Wang and Lei Zhou
20. A novel way to measure refractive errors using a semi-automated refraction system - “Eyeropter”
Lok Hin Chan, Jinhong Sun, Elie De Lestrang Angineur, Venus Suen, Eric Cheng, George Woo, Allen My Cheong and Lydia Yu
21. Chronic systemic hypertension induces functional retinal deterioration via neuroinflammation
Yingkun Cui
22. Exploring Retinal Neuron Response to Defocused Stimuli in Mouse Retinal Circuitry
Chung Him So
23. Glaucoma Rehabilitation using Electrical Transcranial Stimulation (GREAT) - Development of a randomized controlled trial protocol for combined stimulation and perceptual learning for vision enhancement
Shuwen Jia, Xiaolin Mei, Celia Tsang, Ben Thompson and Allen Cheong
24. Reliability of two novel methods for assessing dynamic balance in people with peripheral visual field loss
Yihong Peng, Iris Lau, Stanley Winsor, Man Cheung, Allen Cheong and Ben Thompson
25. Older adults’ preference for intervention to improve the uptake of preventive eye examination
Wing Yan Lau, Jinxiao Lian and Maurice Yap

Thursday, 29 August 2024 | 15:40 – 17:00

Session S02: Innovations in Intelligent Agents and Learning Models

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Cynthia Hou and Zhenjia Lin

1. A Heuristic-Search-Based Topology Identification and Parameter Estimation Method In Low Voltage Distribution Grids with Low Observability
Nan Feng, Yaping Du and Yuxuan Ding
2. Deep learning-based automatic corrosion assessment using GPR.
Nour Faris, Ali Fares, Sherif Abdelkhalek and Tarek Zayed
3. M2-SDAF: Multi-task and Multi-grained Framework for Structural Seismic Damage Assessment Fusing Physics-based and Deep Learning Models
Qingsong Xiong and Yong Xia
4. Artificial Intelligence Boost Bridge Life Cycle Management
Lai Li and You Dong
5. Integrated Remote Sensing and Machine Learning Framework for Urban Heat Island Analysis
Ibrahim Adeniran, Nazeer Majid and Wong Man-Sing
6. Team up with “Alxperts” – promote industrial engineering researchers with Artificial Intelligent experts
Mengtao Lyu and Fan Li

7. Addressing Multimodel Forgetting in Continual Learning with Growing Model Capacity
Zhao Yuqing, Divya Saxena, Jiannong Cao, Xiaoyun Liu and Changlin Song
8. Cross-modal Representation Flattening for Multi-modal Domain Generalization
Yunfeng Fan, Wenchao Xu, Haozhao Wang and Song Guo
9. FedConv: A Learning-on-Model Paradigm for Heterogeneous Federated Clients
Leming Shen, Qiang Yang, Kaiyan Cui, Yuanqing Zheng, Xiao-Yong Wei, Jianwei Liu and Jinsong Han
10. Fuzzy Logic Guided Reward Function Variation: An Oracle for Testing Reinforcement Learning Programs
Shiyu Zhang, Haoyang Song and Qixin Wang
11. R²-Tuning: Efficient Image-to-Video Transfer Learning for Video Temporal Grounding
Ye Liu, Jixuan He, Wanhua Li, Junsik Kim, Donglai Wei, Hanspeter Pfister and Chang Wen Chen
12. Dual Expert Distillation Network for Generalized Zero-Shot Learning
Zhijie Rao and Jingcai Guo
13. Chiron: A Robustness-aware Incentive Scheme for Edge Learning via Hierarchical Reinforcement Learning
Yi Liu, Song Guo, Yufeng Zhan, Leijie Wu, Zicong Hong and Qihua Zhou
14. Semantic Consistency Alignment through Conditional Transport in Compositional Zero-Shot Learning
Miaoge Li and Jingcai Guo
15. PolyTwin: Edge Blockchain-empowered Trustworthy Digital Twin Network for Metaverse
Yinfeng Cao and Jiannong Cao
16. Towards Full Propagation and Predict Against Strong Tie Learning in Graph Poisoning Attack
Yu Bu
17. Adversarial Graph Learning for EEG-Based Auditory Attention-Related Brain Connectivity Detection
Changhong Jing
18. A Framework to Integrate Medical Knowledge into Sepsis Time Series Prediction
Zhihao Zhao and Qixin Wang
19. On the effectiveness of enrollment speech augmentation for Target Speaker Extraction
Junjie Li, Shuai Wang and Kong Aik Lee
20. Reinforcement Learning and Stackelberg Equilibrium for Multi-Agent Cybersecurity Threat Detection and Response
Xinyan Liu
21. Data-Driven Optimization and Automated Design for High-Linearity Power Amplifiers
Jingyun Bi and Xinyu Zhou
22. Develop a software that integrates ChatGTP to write Python programming automatically for quantum chip design.
Chuhan Zhang

23. Voice production: Speech content embedding and speech identification embedding
Chengcheng Zhang
24. Achieving Hydrodynamic Stealth on Fluidic Pinball Using Deep Reinforcement Learning
Yanqi Wang, Feng Ren and Hui Tang
25. A Phone-based Distributed Ambient Temperature Measurement System with An Efficient Label-free Automated Training Strategy
Dayin Chen, Xiaodan Shi, Haoran Zhang, Xuan Song, Dongxiao Zhang, Yuntian Chen and Jinyue Yan

Thursday, 29 August 2024 | 15:40 – 17:00

Session S03: Advanced Materials in Energy Conversion and Storage 1

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Cong Ma and Min Xu

1. Flame-retarded and mechanic-robust phosphorus doped MoS₂/epoxy composite as superior barrier for blocking the thermal runaway propagation of LIBs
Yuxin Zhou, Junling Wang, Zhirong Wang and Xinyan Huang
2. Enhanced Electrocatalytic Hydrogen Evolution in Alkaline Saline Electrolyte by NiCo Foam Supported Iridium Nanoclusters
Jiaxin Yuan
3. Formation and accumulation of photochemical ozone in three bays of China revealed by field observations and model simulations
Haonan Zhang and Hai Guo
4. Co-adsorbed Self-Assembled Monolayer Enables High-performance Perovskite and Organic Solar Cells
Dongyang Li and Gang Li
5. A nitrogen-doped, multiscale porous electrode for high-performance zinc-bromine flow batteries
Jiayi Li, Zeyu Xu and Maochun Wu
6. In-situ observation of bubble behaviors in aqueous rechargeable zinc-air batteries
Gang Liu, Mingcong Tang, Xiaoyu Huo, Wenzhi Li, Maochun Wu and Liang An
7. Quantifying the effects of spectral and directional distribution of radiation on its propagation in water for energy applications
Nan Deng, Peixin Dong and Mengying Li
8. An in-situ quantification method for ammonia crossover measurement in anion-exchange membrane direct ammonia fuel cells
Wenzhi Li, Yun Liu and Liang An
9. Size effect on the mechanical behaviours of pure copper sheet-based triply periodic minimal surface structures fabricated by micro-laser powder bed fusion
Dien Hu
10. Simultaneous production of cement precursor and pure iron by a single electrochemical reactor
Changkang Du, Mingcong Tang, Zhefei Pan and Liang An

11. Development of a Vanadium-Chromium Redox Flow Battery for Future Large-Scale Energy Storage
Xiaoyu Huo, Xingyi Shi, Yuran Bai, Mingcong Tang, Yikai Zeng and Liang An
12. Mechanics-based investigation of the hygroscopic swinging motion of MXene film for its application in energy conversion and harvesting
Zijing Zhang
13. In-situ diagnosis of polarization processes in water electrolyzer based on electrochemical impedance spectroscopy
Qing Wang, Lizhen Wu, Yun Liu and Liang An
14. Surface-Mediated CO Dimerization: Investigating Cation Stabilization Effects on Copper and Platinum
Hon Ho Wong and Bolong Huang
15. Two-terminal Organic Electrochemical Transistor Biosensors with Super-Nernstian Response
Zhiyuan Tian and Feng Yan
16. Pyro-Phototronic enhanced all van der Waals self-powered ultra-fast photodetectors
Tawsif Ibne Alam, Sumaiya Umme Hani and Yuen Hong Tsang
17. Lanthanide Ion Doped Bi₂WO₆ Nanosonosensitizers Based Hydrogel for Enhanced Sonodynamic Bacterial Elimination and Wound Healing
Xinyue Lao, Qianqian Bai and Jianhua Hao
18. Bio-Inspired Stretchable Strain Sensor based on 2D Perovskite Nanosheet
Sanqing Zhao, Dapeng Liu and Feng Yan
19. Ferroelectric modulation of ReS₂-based multifunctional optoelectronic neuromorphic devices for wavelength-selective artificial visual system
Zhaoying Dang, Feng Guo and Jianhua Hao
20. Mixed ionic conductor brings extra gain in oxygen-evolving activity of NiFe hydroxide electrocatalyst at practical working temperature
Lu Li, Gao Chen, Haitao Huang and Liqi Bai
21. Large photoelectrochemical activity of flexible TiO₂/SrRuO₃ oxide heterojunction
Jiaqi Zhang, Jialin Chen and Shanming Ke
22. Effects of Kaolin-modified Superabsorbent Polymers on Mortar Properties
Yifan Zhou, Yutian Bi and Junying Lai
23. A High-Performance Cellulose-Based Aerogel Evaporator for Continuous Solar-driven Water Desalination
Yerlan Turaly, Xiaomeng Zhao, Kit-Ying Chan and Xi Shen

Thursday, 29 August 2024 | 17:10 – 18:30

Session S04: Designing the Future

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Catherine Cheung and Chloe Ki

1. Effectiveness of Ecological Momentary Interventions on Pain, Mental Health, and Quality of Life in Individuals with Rheumatic Disease: A Systematic Review and Meta-Analysis
Xiaoxiao Mei, Yan Li, Yule Hu, Jiaying Li and Wing Fai Yeung
2. Exergame-assisted simultaneous motor-cognitive training for middle-aged old adults in Hong Kong: a feasibility and pilot randomized controlled trail study
Yaqin Li, Angela Yee Man Leung and Jed Ray Gengoba Montayre
3. Re-Innovating Dialogue Inconsistencies: A Co-Design Model for Enhancing Brand Perception in Product and Service Development
Bharati Das
4. Windows as Pathways to Well-being in Hyperdense Asian Context: Investigating the Role of Views, Nature, and Context in Enhancing the Psychosocial Well-being of Older Residents in Hong Kong's Care Homes
Mohana Das
5. Architecture as empowerment: Asset based architectural design in vulnerable community - participatory action research in Iraq Bersive 2 refugee camp
Hei Chan and Peter Hasdell
6. Exploring Physical Activity Motivation and Self-Regulation through AIGC-Immersive Mindfulness Design for Wellbeing
Mengru Liu, Anthony Kong and Zeping Feng
7. Co-designing Inclusive Spaces for Teens with ASD and Caregivers: The Context of Museum Learning
Qian Jiang
8. Care Work in the Heterotopia: Care and Discipline in the Nursing Homes of Hong Kong
Yunhe Du and Yu Hin Brian Lee
9. A New Approach for Investigating the Brain Behaviors in Problem-Finding and Problem-Solving During Design Teamwork
Luqian Wang and Yi-Teng Shih
10. Elderly-Friendly AI Financial Assistant Design
Ziyi Chen, Yujie Zhu and Stephen Jia Wang
11. Decentralized Marketing Analytics: A Conceptual Framework for Measuring Fashion Consumers' Touchpoints on the Blockchain
Ashley Chenn and Erin Cho
12. The synthesis, recovery, and application of environmentally friendly dyes
Liang Jin and Xungai Wang

13. Customizable Sustainable Polyzwitterionic Hydrogels for Ultra-Efficient Evaporative Cooling and Energy Conservation
Xuanxuan Du and Jintu Fan
14. A Durable, Breathable, and Weather-Adaptive Coating Driven by Particle Self-Assembly for Radiative Cooling and Energy Harvesting
Jinhao Xu, Fei Liang and Dahua Shou
15. Polycation Clustering Creates Localized Electrostatic Attraction for Swift Removal of Airborne Bacteria
Yuanyuan Zhao and John Xin
16. Diapers with next-to-skin moisture-adaptive embossment for improved comfort
Lijun Wang, Jintu Fan, Pik Yin Mok, Dahua Shou and Sa Xu
17. Evolution of Online Shopping Assistants with Generative AI: From Text-Based Chatbots to Virtual Avatar Assistants (VAAs) - Impact of VAAs' Form Realism on Consumer Fun and VAA Service Usage
Hanfei Xue, Jiayu Wang, Sze Man Chong, Minkyong Bae, Chung-Wah Chloe Ki and Christina Wy Wong
18. Theoretical framework of factors influencing elderly women's motivations for online fashion shopping
Yushi Lin, Joe Au and Jin Lam
19. Sustainability Beyond Rhetoric: Avoiding Greenwashing After Firms' Carbon-Neutrality Goal Setting
Shuhan Wang, Di Fan, Kwan-Yu Lo and Andy C. L. Yeung
20. A New Classification of Women's Fashion Brand Styles in China's Greater Bay Area
Yunqiu Liu, Joe Au, Jin Lam and Chupo Ho
21. Skin-inspired permeable structure-gradient fiber mats for pressure sensing in rehabilitation assistance
Jinxing Jiang and Qiyao Huang
22. Design and Implementation of the Joule Heating Network for Simultaneous Thermal and Moisture Management in Advanced Fabrics
Wanyu He
23. Immigrant Identity and Clothing: A Semi-systematic Review and Future Directions
Mei Lai Leung, Mei Yu Yao and Li Li
24. ESG Standardization of China's Textile Industry: Green Transformation of the Textile Industry and Reduction of Carbon Emissions.
Bohan Wang, Chi Wai Kan and Bohan Wang
25. Development of A Blockchain-based Circular System in Fashion Industry – A Conceptual Architecture Framework
Xi Xuan Wang, Tin Wai Cheung, Mei Yu Yao, Run Zhao and Li Li

Thursday, 29 August 2024 | 17:10 – 18:30

Session S05: Innovation and Enterprise

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Xiaomeng Guo and Chien-Ling Huang

1. Does Allowing the Public to Request Information Lower Government Financing Costs? Evidence from the Municipal Bond Market
Mengdi Zhang, Yongtae Kim, Nancy Lixin Su and Vincent Qiru Zhang
2. Geopolitical Risk and Global Supply Chain Dynamics
Lei Zhuang, Lixin Su and Jing Zhao
3. The Role of Accounting Disclosure in Curbing Monopolistic Behavior: Evidence from Pharmaceutical Companies
Xinyue Zhu, Paul Wang and Tracie Frost
4. Learning from Peers: Information Spillover on ESG Investment
Min Yinghua
5. Unveiling the Information Advantage of Short Selling Speculators: Empirical Insights from China's Educational Industry
Lihao Zhou
6. Collaboration Effects of Virtual Influencers on Social Media Marketing
Nga Yin Dik, Chris K. Y. Lo and Andy C. L. Yeung
7. Liner shipping fleet planning with uncertain demand: a data-driven distributionally robust chance-constrained optimization approach
Xu Xin, Shuaian Wang and Tao Zhang
8. Finding the minimal cost-to-time cycle: A data-driven approach
Ziao Zhao and Qinghe Sun
9. Different Strokes for Different Folks: How Firms' Language Complexity Influences Corporate Social Responsibility (CSR) Rating Divergence?
Luman Yu
10. Style over Content: Understanding User Satisfaction with AI Companions
Yiyao Chen, Fei Liu, Yijing Li, Yongqiang Sun and Chee-Wee Tan
11. Prompts as Digital Assets: Balancing Copyright Protection and Avoiding the Tragedy of the Anti-Commons
Tonglin Zhang, Lionel Z. Wang and Siyuan Jin
12. Piercing Your Shield with Your Spear: Detecting Machine-Generated Fake News Using LLM-Driven Rationales and Adversarial Contrastive Learning
Ka Chung Ng and Lionel Z. Wang
13. The One Who Serves Two Masters: A Latent Profile Analysis on Boundary Spanners' Identification with Their Employing and Client Organizations
Yan Qiao, Fuli Li and Man-Nok Wong

14. The Effect of Mid-semester Assignments on Autonomous Motivation among University Students during a Semester
Xupeng Guo
15. Effect of Subcutaneous White Adipose Tissue Senescence and Apoptosis on Liver Fibrosis
Pujie Liu, Kekao Long and Kenneth Cheng
16. Lantana camara Linn. water extract modulates macrophages antioxidant, anti-inflammatory, and anti-bacterial responses via Nrf2/HO-1 and MAPK signaling
Pak-Ting Hau, Carsten Tsun-Ka Kwok, Ray Chun-Wai Yu, Matthew Sung-Him Ko, Kenneth T Y Ho, Sai-Wang Seto and Franklin Wang-Ngai Chow
17. Enhancing Chest X-Ray Report Generation in Radiology through Deep Learning: Leveraging Keywords from Existing Reports and Multi-Label Classification
He Zebang and Jung Sun Yoo
18. Elucidating the functional impact of copy number variations in complex diseases through an enhanced computational pipeline
Jiahong Sun, Kent Wong, Wenfei Jin, Shea Ping Yip and Chien-Ling Huang
19. Unraveling the Regulatory Role of a Myopia-associated LncRNA Network Using Stem Cell-Derived Retinal Ganglion Cells
Zhiwei Jiang, Nonthaphat Wong, Shea Ping Yip and Chien-Ling Huang
20. Multi-level genetic analysis identified a candidate mutation for myopia with changes in genetic activity

Lordjie Marr Otamias Morilla
21. A new genomic tool for assessing the functionality of thousands of SNPs simultaneously
Riham Moharam, Shumeng Luo, Chien-Ling Huang and Shea-Ping Yip
22. Wearable Triboelectric Nanogenerators Based on 2D Graphitic Carbon Nitride Doped Composites
Yana Xiao and Yintung Lam
23. Personalized nanofiber-based strategy for smart regulation of diabetic wounds
Li Ma and Ying Ji
24. UV-assisted Spinning of Tough, Stretchable, and Resilient Ionotronic Fibers for Stable Signal Transmission
Lingtao Fang and Qiyao Huang

Thursday, 29 August 2024 | 17:10 – 18:30

Session S06: Renewable Energy and Sustainability

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Wei Liu and Naeem Shahzad

1. Performance investigation of solar photovoltaic module cooling by hydrogel with enhancing the internal thermal conductivity
Cong Lai and Lin Lu
2. Towards High-Efficient Coloured Monocrystalline Solar Photovoltaic Modules: thermal and power performance analysis
Tianlu Chen
3. A novel assessment method for city region marine environment site selection and heuristic optimization of micro-layout for offshore wind farms
Linghe Ye, Lin Lu and Shaohai Zhang
4. Retrofitting or replacing? - The cost-effectiveness analysis of different strategies of reducing PM emissions from non-road mobile source in Hong Kong
Yixin Xie, Yixin Xie and Yixin Xie
5. PM2.5-induced in vitro oxidative stress and component-specific toxic contributions in eastern and southern China
Yihua Wang, Ling Jin, Jiawen Xie, Qian Yang and Xiangdong Li
6. Tiny endotoxin, big impact: How a minuscule portion of PM2.5 causes disproportionate toxicity
Jinyan Yu, Tian Chen and Ling Jin
7. Latching control: from a wave energy converter inspired control strategy to vibration control of floating offshore wind turbines
Hao Wang and Songye Zhu
8. Traffic-related PM2.5 pollution in Hong Kong: source- and component-resolved health risks and cytotoxicity
Qian Yang, Jiawen Xie and Xiangdong Li
9. An Observational Constraint of VOC Emissions for Air Quality Modeling Study in the Pearl River Delta Region
Beining Zhou and Hai Guo
10. Electric vehicle charging coordination for CO2 emission mitigation under uncertain demand
Zixuan Kang, Zhongnan Ye and Shu-Chien Hsu
11. Improving health system resilience in response to climate change: learning from the pandemic experience
Ningyezi Peng and Xintao Liu
12. A Doppler frequency metric for GNSS spoofing detection in urban environments
Jingxiaotao Fang

13. Robust planning of bus fleet electrification and charging facility deployment over multi-period
Yihan Gao and Wei Liu
14. Fleet management with electric vehicles: integration of ride, parcel delivery, and vehicle-to-grid services
Qingying He and Wei Liu
15. Grid-forming and Grid-following Converter Integration Studies for Future Renewable-dominated Power Systems
Ziheng Huang and Siqi Bu
16. Application of Artificial Intelligence in Stability Assessment of Renewable Energy Penetrated Grids
Jiarui Feng
17. A Quasi-Isotropic and Uniformly Polarized Ultracompact Wireless Power Source for Energizing Battery-Free Internet of Things Devices
Huacheng Li and Wei Lin
18. Experimental Study of Sports-Footwear Microclimate and Aerodynamic Performance
Yuting Wu, Junyan Shen, Yanqi Wang, Fuwang Zhao and Hui Tang
19. Water evaporation and power generation study in a hybrid PV-Salt co-production system via numerical modeling for enhanced integrated benefits
Haoran Chang and Mengying Li
20. Enhancing Robustness in PV Segmentation: A General Generative AI-based Image Augmentation Method
Hongjun Tan, Zhiling Guo, Zhengyuan Lin and Jinyue Yan
21. Enhancing energy efficiency of air conditioning system through optimization of PCM-based cold energy storage tank: A data center case study
Yan Liang, Haibin Yang, Huilong Wang, Xiaohua Bao and Hongzhi Cui
22. Integrating Feature Importance Analysis and Transformer-MDN for Enhanced Electric Vehicle Charging Prediction
Shibo Zhu, Xiaodan Shi, Yuntian Chen, Haoran Zhang, Tianhao Wu and Jinyue Yan
23. Occurrence and in vitro toxicity of tire rubber antioxidants and transformation products in PM2.5
Junrong Su, Ling Jin and Zhen Leng
24. Human-Robot Collaboration: Developing Robust and Secure Autonomous Drone Navigation Systems for Smart Manufacturing Environment
Sashenka Gamage
25. Discovery of antimicrobials targeting RNA polymerase-sigma factor interaction
Jiang Liu and Cong Ma

Friday, 30 August 2024 | 11:45 – 12:45

Session S07: Societies and Communities

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Daniel Elkin and Lu Yu

1. Effects of a digital single-session growth mindset intervention on negative emotions for improving university students' mental health: A two-armed randomized controlled trial
Yuxi Hu, Shimin Zhu and Di Qi
2. An internet-based acceptance and commitment therapy for anxiety and depression in cancer patients: a pilot randomized controlled trial
Tao Zhang, Bryant Hui and Zhihong Ren
3. Both quality and quantity matter: The role of parent-child communication on Chinese rural left-behind children's educational expectation
Jia Zhuang, Jacky C.K. Ng and Qiaobing Wu
4. Do Working Pensioners Live Longer in China?
Shuai Zhou and Xue Bai
5. "Look at Me, Sis!" Exploring Identity Work of Returnee Entrepreneurs in Rural China
Xiaoxiao Duan and Qiaobing Wu
6. Investigating Effects of Testosterone on Prosocial Aversive Learning: A Double-Blind, Placebo-Controlled Study
Shuang Liu, Yang Hu and Yin Wu
7. Family Resilience of Chinese Rural Adolescents: Measurement and Profiles.
Chen Deng and Lu Yu
8. A Mixed Method Study on Career Adaptability and Well-Being of Emerging Adults in Ethiopia
Dagim Dawit Gonsamo and Herman Lo
9. It Feels Good to Cook for Others: Examining the Relationship between Prosocial Cooking and Well-being
Linting Zhang, Johnny Ching Yin Lam, Jacky Chi Kit Ng, Edmond Pui Hang Choi, Anise Man Sze Wu and Bryant Pui Hong Hui
10. Does social capital influence care planning among older migrants relocating to their adult children? Evidence from urban China
Rui Kang
11. Adolescents' Mindsets in the Relationship between Family Environment, Non-Suicidal Self-Injury, and Suicidality: Unravelling Gender Differences
Yongyi Wang and Shimin Zhu
12. Multi-Omics analysis for radiation pneumonitis automatic prediction in lung cancer patients
Mayang Zhao, Zhi Chen, Yu-Hua Huang, Yao Pu, Zihan Li, Jing Cai and Ge Ren
13. Urban Metagenomics in Action: A Metagenomic-Enabled Surveillance of Pathogens and Antimicrobial Resistance in the Hong Kong Subway System
Alison Yee Ting Lam and Kit Hang Siu

14. Urolithin A and Methyl-urolithin A alleviate hepatic inflammation and fibrosis in the mouse model of dietary-induced non-alcoholic fatty liver disease
Tongxi Zhou, Ka Lok Wu and King Yip Cheng
15. Inactivation of Branched-chain amino acids catabolism by PPM1K provokes an inflammatory response in macrophages
Xiao Fan Xu, Ka Lok Wu and King Yip Cheng
16. Assessing the mental health of radiotherapy cancer patients and its association with optimism
Wing Ka Grace Ho and Ka Hei Man
17. Functional dose-volume analysis based on a novel image biomarker derived from DCE-MRI for predicting post-SBRT liver function preservation in hepatocellular carcinoma patients
Yimin Ni, Ho-Fun Lee, Chi-Leung Chiang, Lai-Yin Cheung, Xinzhi Teng, Jiang Zhang, Ge Ren, Jing Cai and Tian Li
18. High-throughput drugs screening platform for Glioblastoma Multiforme utilizing p21/MSI-1 interactions
Pok Kong Tsoi, Man Ding Wong, Xian Liu and Liang-Ting Lin
19. Urban Environment Through a Language Lens: Mosque Perceptions as a Case Study
Mohamed Ahmed Mohamed Abdellatif Khalil

Friday, 30 August 2024 | 11:45 – 12:45

Session S08: Signal Transmission and Power System

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Jinpeng Tian and Yancy Zhu

1. Large Language Models for Cuffless Blood Pressure Measurement from Wearable Biosignals
Chen Chen, Jiannong Cao and Ye Li
2. Tag-Free Indoor Localization: A Cost-Effective Solution using Web Cameras
Tianyi Zhang
3. Distributed Compressive Sensing for Wireless Signal Transmission in Structural Health Monitoring Systems
Yiwei Li, Jiannong Cao and Youliang Ding
4. Control-CPS Testing: Oracle, System Identification, and Coverage Issues
Shiyu Zhang and Qixin Wang
5. Finding Defective Elements in Intelligent Reflecting Surface via Over-the-Air Measurements
Ziyi Zhao, Zhaorui Wang, Shuowen Zhang and Liang Liu
6. Design of a safety driving support system for solving the truck blind spot problems
Siyang Liu
7. Blockchain-enabled Smart E-Lock for One-Stop Cross-Border Logistics
Zhang Qigang, Wang Yulong and Xu Gangyan
8. Differential Encoding for Single-pixel Imaging and Transmission Through Scattering media
Yining Hao and Wen Chen

9. MM-NodeFormer: Node Transformer Multimodal Fusion for Emotion Recognition in Conversation
Zilong Huang, Man-Wai Mak and Kong Aik Lee
10. Advanced Phased Array Technology Facilitated by Multi-Functional Metasurfaces for Satellite-Assisted Internet of Things Application
Yuqi He and Wei Lin
11. Incorporating Latent Spatial Structure in Time Series Forecasting Using Spatial-Temporal Series Forecasting Models: An Application to Stock Price Forecasting
Yu Pan
12. Design of a Highly Efficient and Linear Gallium Nitride Doherty Power Amplifier for Next-Generation Wireless Communication Systems
Yanze Wang
13. Neural Convolutional Network for Abnormal Gait Detection Based on Spatial Attention Map
Zongqi He and Ping Li
14. Hybrid Beamforming Design for Integrated Sensing and Communication Exploiting Prior Information
Yizhuo Wang and Shuowen Zhang
15. User-Assisted Networked Sensing in Ofdm Cellular Network with Erroneous Anchor Position Information
Xianzhen Guo, Qin Shi, Liang Liu and Shuowen Zhang
16. Optimal Transmit Signal Design for Multi-Target MIMO Sensing Exploiting Prior Information
Jiayi Yao and Shuowen Zhang
17. Robust Autonomous System Under Challenging Conditions
Kaiyuan Wang
18. MUSIC Algorithm for IRS-Assisted AOA Estimation
Qipeng Wang, Liang Liu and Shuowen Zhang
19. Secure Integrated Sensing and Communication Exploiting Target Location Distribution
Shuowen Zhang and Kaiyue Hou

Friday, 30 August 2024 | 11:45 – 12:45

Session S09: Advanced Materials in Energy Conversion and Storage 2

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Mengying Li and Maochun Wu

1. Exploring shape memory alloy angles: from thermo-mechanical properties to seismic applications
Min Zhu and Michael Yam
2. Advancements in Photonic Silicon Chip Device Design
Yu Tong Zhou
3. High-capacity and Ultrastable Magnesium Batteries Enabled by Unique Solvation Reorganization in a Hybrid-Solvent Electrolyte
Feiyang Chen and Zheng-Long Xu

4. KxVPO₄F (x~0): a new high-voltage and low-strain cathode material for ultrastable calcium rechargeable batteries
Renjie Li and Zheng-Long Xu
5. High-strength and high-conductivity additively manufactured Cu-O alloy enabled by cellular microstructure
Qi Liu and Zibin Chen
6. Interactions between transport phenomena and transient characteristics of solid oxide cell
Zhaojian Liang, Jingyi Wang, Keda Ren, Zhenjun Jiao, Meng Ni, Liang An, Yang Wang, Jinbin Yang and Mengying Li
7. Bismuth Nanoparticles Encapsulated in Porous Carbon Spheres on Graphite Felt Electrodes for Vanadium Redox Flow Batteries
Yuran Bai, Xiaoyu Huo, Xiaohong Zou and Liang An
8. Performance characteristics of an ammonia-fed anion exchange membrane fuel cell
Xusong Gong, Wenzhi Li and Liang An
9. Electrochemical Nitrate Reduction to Ammonia on CuCo Nanowires at Practical Level Through Tandem Catalysis
Kouer Zhang, Xiao Zhang and Liang An
10. Atomically Confined Ru Sites in Octahedral Co₃O₄ for High-Efficiency Hydrazine Oxidation
Yanjie Zhai
11. Red-light-controlled supramolecular assemblies of indigo amphiphiles at multiple length scales
Chun Kit Yau and Franco King-Chi Leung
12. Sprayable biomimetic double mask with rapid autophasing and hierarchical programming for scarless wound healing
Yuhe Yang, Di Suo and Xin Zhao
13. Atomscopic Explorations of Ripple induced Strain Effect in Low-Dimensional Transition Metals
Cheuk Hei Chan and Bolong Huang
14. Er-stabilized ferroelectricity in epitaxial HfO₂ thin films intrinsically incorporated with down- and up-conversion photoluminescence
Yifei Zhao and Jianhua Hao
15. Bioinspired In-Sensor Spectral Adaptation for Perceiving Spectrally Distinctive Features
Jialiang Wang, Bangsen Ouyang, Guang Zeng and Yang Chai
16. Highly Nonlinear Memory Selectors with Ultrathin MoS₂/WSe₂/MoS₂ Heterojunction
Hongye Chen, Yang Chai and Hongyu Yu
17. Holistic Passivation with Multi-Self-Assembled Molecules for Efficient Outdoor and Indoor Photovoltaics Achieving Record-Breaking Open-Circuit Voltages
Jianjun Mei and Feng Yan

18. Microwave-Assisted Process Intensification in Ammonia Decomposition for Hydrogen Supply in Fuel Cells
Yunyi Tang, Chiu Shek Wong and Meng-Jung Li
19. Perovskite Solar Modules Based on Surface Reconstruction Technology
Bochun Kang, Jing Zhuang and Feng Yan
20. Multidimensional vision sensors for information processing
Zhaoqing Wang, Tianqing Wan and Sijie Ma
21. High-throughput Identification of 2D high-k dielectrics for InSe based 2D devices
Ruixi Yu

Friday, 30 August 2024 | 13:45 – 15:00

Session S10: Language, Culture and Tourism

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Echo Ke and Mimi Li

1. Unveiling Market Insights by Deciphering CEO Interview Videos: A Multimodal Joint Deep Learning Approach
Ka Chung Ng, Lionel Z. Wang and Zhoudao Lu
2. Exploring the Impact: Top Management Team Mobility on Source Firm Performance and Exploratory Innovation
Ao Yan
3. Capturing Value from Sustainability-Conscious Consumers: Price Premiums for Sustainability Features in Fast-Moving Consumer Goods (FMCGs)
Ruofei Wang
4. The development of definitional skill in Mandarin-speaking Preschoolers: Evidence from a novel word learning experiment
Weihua Duan, Jiayu Yu and Li Sheng
5. Employing Glyphic Information for Chinese Event Extraction with Vision-Language Model
Xiaoyi Bao, Jinghang Gu, Zhongqing Wang, Minjie Qiang and Chu-Ren Huang
6. A study on the secularization of the image of redhead in medieval English literature
Jin Yu
7. Systematic Review and Modeling of Communication Challenges in Aircraft Maintenance: An Integrative Model Based on 24 Years of Research
Wanwen Wang
8. Small talk in academic workplace: time-wasting or work facilitator?
Xinrui Li
9. Navigating the multiple expectations: Chinese female university teachers' identity performance on social media
Jie Bao and Dezheng William Feng

10. Intergenerational Ambivalence, Constraints, and Perceived Social Support: Travel Intention of Family with Children Diagnosed with ASD
Yan Wan, Junchuan Wang and Mimi Li
11. GenAI-Powered Virtual Tours: Promoting Well-Being Among the Elderly
Jingxian Liu, Fei Hao and Chen Zhang
12. Automated Video Interview as a Novel HR Management Tool: Investigating Its Effectiveness and Potential Generative-AI application
Dongbo Che
13. Nudging Sustainable Transportation within Destinations: A Tailored Behavioral Diagnostic Approach
Xinyue Ni, Dan Wang and Hui Li
14. Too appealing to perceive crowding: The role of GAI tour guide's narrative transportation
Yang Yixin and Li Mimi
15. What is beautiful is good: Attractive avatars for healthier dining and satisfaction
Fei Hao, Adil Masud Aman and Chen Zhang
16. Self-Representation of Solo Travellers: The Narrative of Chinese Travellers
Sivasubramaniam Thivyaashani and Kam Hung
17. The Psychological Benefits and Mechanisms of Co-creating Animal-Based Tourism
Fumei Guo, Bo Li and Mimi Li
18. From tourists' destination curiosity to tourists' pro-environmental behaviors? Adopting Construal Level Theory
Shuran Ma and Dori Davari
19. Exploring the Formation of Place Attachment in Zoo Tourism: Attachment Transfer and the Role of Human-animal Interactions
Yang Zhou, Guyang Lin and Mimi Li
20. Circular Time Perspectives in Environmental Public Service Ads: Addressing Moral Disengagement among Tourists
Shuwen Tan and Guoqiong Ivanka Huang
21. Metaverse and regenerative tourism: the role of avatars in promoting sustainable practices
Shuxu Liu and Fei Hao
22. Exploring Chinese sustainable tourism: A 25-year perspective
Xuejie Qiu and Faye Hao

Friday, 30 August 2024 | 13:45 – 15:00

Session S11: Cutting-edge AI Applications and Model Development

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Siqi Bu and Qin Wang

1. Digital Twin Model for Traffic Load Monitoring and Internal Load Evaluation of the Tsing Ma Suspension Bridge
Liao Yang, Qijian Zhao and Xiyuan Yu
2. Latent space-based machine learning model for the prediction of flame-flow coupled fields
Yi Yang, Yu Guan and Qiang An
3. CMViM: Contrastive Masked Vim Autoencoder for 3D Multi-modal Representation Learning for AD classification and prognosis
Guangqian Yang, Ye Du and Shujun Wang
4. Development of Deep Learning Algorithms for Automated Scoliosis and Abnormal Posture Screening Using 2D Back Image
Zhenda Xu
5. Towards Ultra-Low-Power Neuromorphic Speech Enhancement with Spiking-FullSubNet
Xiang Hao and Chenxiang Ma
6. TCNFN: Tri-Channel News Fusion Network for Exchange Rate Forecasting
Zhoudao Lu, Chao Zhang, Yaowei Wang and Qing Li
7. Cost-efficient Knowledge-based Question Answering with Large Language Models
Junnan Dong, Qinggang Zhang, Chuang Zhou and Xiao Huang
8. Debiasing Graph Representation Learning based on Information Bottleneck
Mingxuan Ouyang, Ziyi Zhang, Wanyu Lin, Hao Lan and Lei Yang
9. Low-Rank Tensor Networks with Inter- and Intra-Modality Consistency Regularization for Psychological Resilience Analysis
Zhi Zhang, Yan Liu, Mengxia Gao, Yu Yang, Jiannong Cao, Wai Kai Hou, Shirley Li, Sonata Yau, Yun Kwok Wing and Tatia M. C. Lee
10. Sustainable Federated Learning with Long-term Online VCG Auction Mechanism
Leijie Wu
11. Scaling Supervised Local Learning with Augmented Auxiliary Networks
Chenxiang Ma
12. Is AI Cognitively Biased? An Exploratory Study on Threshold Priming in LLM-Based Batch Relevance Assessment
Nuo Chen, Jiqun Liu, Xiaoyu Dong, Qijiong Liu, Tetsuya Sakai and Xiao-Ming Wu
13. Towards Smart Contract Fuzzing on GPUs
Weimin Chen, Xiapu Luo, Haipeng Cai and Haoyu Wang
14. Cost Aware Untargeted Poisoning Attack against Graph Neural Networks
Yuwei Han, Yuni Lai, Yulin Zhu and Kai Zhou

15. Enhancing Explainable Rating Prediction through Annotated Macro Concepts
Huachi Zhou, Shuang Zhou, Hao Chen, Ninghao Liu, Fan Yang and Xiao Huang
16. BaiTest: an AI Evaluation Platform for Deploying ML-based Forecasting Models in Building HVAC System
Yang Deng, Rui Liang and Dan Wang
17. User Satisfaction Estimation with Deep Learning in Conversation and Dialogue
Junchen Yue
18. GPTutor: Intelligent Tutoring System Powered by Generative AI with Reliable Response
Haoran Bai and Wing Cheung Lui
19. Inductive Spatial Temporal Prediction with Informative Graph Neural Network
Jialun Zheng, Divya Saxena and Jiannong Cao
20. Noise-based Privacy Protection Assisted Homomorphic Encryption for Federated Learning
Yuxiao Ma
21. Towards Robust and Interpretable Spatial-Temporal Graph Modeling for Traffic Prediction
Hanchen Yang
22. AiFashion: Multi-modal and Multi-dimensional Large Model for Fashion Design and Human Robot Collaborative Manufacturing
Gui Hongquan, Li Ming and George Huang
23. Spatial Solar Forecasting Based on Cloud Properties Retrieval and Deep Learning Techniques
Yuying Xie and Mengying Li
24. SolarFusionNet: Enhanced Solar Irradiance Forecasting via Automated Multi-Modal Feature Selection and Cross-Modal Fusion
Tao Jing and Mengying Li
25. A Reddit-based suicide ideation detection approach using multi-task learning
Ziyan Zhang and Qing Li
26. Variational Bayesian Factor Analysis on 2D Image Data through High-dimensional Matrix Learning
Ran Jiang

Friday, 30 August 2024 | 13:45 – 15:00

Session S12: Advanced Machine Learning Techniques and Applications 1

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Yongbao Chen and Pai Zheng

1. Intelligent Fire Engineering Design Driven by Artificial Intelligence
Yanfu Zeng and Xinyan Huang
2. A Spectral Boundary Integral Method for Computing Surface-Wave Inducing Underlying Hydrodynamics
Xianlong Lin and Qianyu Chen

3. Unveiling the Truth: Energy-Environment-Economic (3E) Assessment on Sustainability of Bioplastics and Recycling
Raffel Dharma Patria and Shao-Yuan Leu
4. Unveiling the Geographical Dynamics of Domestic Talent Movement Among Chinese Researchers: A Data-Driven Study
Ying Na
5. Understanding Community Needs Through Cross Generation Study: A District-Level Analysis Revealing Inequities in Accessibility and a Resident Survey in Hong Kong
Mingjie Duan, Mingzhen Liu and Xiaoyue Tan
6. Online Coordinated Vehicle-Drone Path Planning for Urban Healthcare Delivery Services
Xintong Li and Wei Liu
7. Accurate 6-DoF Motion Estimation for Irregular Moving Objects with Point Correlations
Hao Cao, Guanzhong Zhou and Hailong Huang
8. Transport of reactive scalars in incompressible flows studied with Lagrangian coherent structures
Fang Bian
9. Assessment and Mitigation of GNSS Positioning Degradations Under Vegetation
Jiayi Zhou
10. Calibrated Binary Segmentation
Juncheng Wang
11. KnowGPT: Black-Box Knowledge Injection for Large Language Models
Qinggang Zhang, Junnan Dong and Xiao Huang
12. Learning Predictive World Models for Intelligent Agents in 3D Open-World Virtual Environments
Yuqi Wang and Bing Wang
13. Enhancing Bimanual Robotic Manipulation through Safe Reinforcement Learning and Visual-Language Model
Rui Cao, Jiannong Cao and Zhixuan Liang
14. ISABEL: In-Switch Aggregation for Accelerating Large Language Model Inference at the Edge
Peirong Zheng, Wenchao Xu and Jinyu Chen
15. Generating Music with Better Structure via Musical Phrase Construction and Interaction
Xiao Ma
16. CausalBench: A Comprehensive Benchmark for Causal Learning Capability of Large Language Models
Yu Zhou, Jibin Wu and Kay Chen Tan
17. Graph Anomaly Detection with Noisy Labels by Reinforcement Learning
Zhu Wang and Xiao Huang
18. A Three-party Game Based on Trust for IoT Task Delegation in An Untrusted Environment
Tong Li

19. Boosting LoRa Concurrency by Channel Adaptation
Ziyue Zhang, Xianjin Xia and Yuanqing Zheng
20. Abstract of URIS project : Constructing Comprehensive Knowledge Graph for Artificial Intelligence Courses with Large Language Models
Xinshen Zhang
21. A Conditional Generative Adversarial Network for Signal Data Augmentation in Ultra-precision Machining Surface Roughness Prediction
Suiyan Shang, Chi Fai Cheung and Pai Zheng
22. Impact of Open Skies Agreements on US Bilateral Service Export and Import Trade: Focus on OSA Lead and Lag effects
Xiangru Wu, Tae Hoon Oum, Yulu He and Kun Wang
23. Deep Reinforcement Learning for Solving the Integrated Airline Recovery Problem
Qi Wang and Xin Wen
24. Investigating the efficacy of integrated Mechatronics and Artificial Intelligence (AI) in Wall Painting: A potential pathway to shaping industrial processes and enhancing worker safety
Farrukh Rasheed
25. Bioinspired in-sensor multimodal fusion for enhanced spatial and spatiotemporal association
Sijie Ma, Tianqing Wan and Yang Chai

Friday, 30 August 2024 | 15:10 – 16:25

Session S13: Health and Technology

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Lawrence Chan and Xing Hang

1. Secreted PTPRD: A Regulator of Insulin Secretion and Glucose Homeostasis
Xiang Li and Chiming Wong
2. Efficient protection against breast cancer development achieved through the adoptive transfer of dendritic cells primed with S100A4
Yuxuan Wu and Xiang Zou
3. Hepatocyte specific delivery of MDM2 antisense oligonucleotides counteracts dietary-induced non-alcoholic fatty liver disease in the mouse model
Md Moinul Hoque and Kenneth Ky Cheng
4. Exploring Risk Factors for Thyrotoxic Periodic Paralysis: A Population-based cohort study in Hong Kong
Xiaoyu Wan and Gloria Hoi-Yee Li
5. Integrating AI and Intravital Imaging for Predictive Modeling of Treatment Response in Angiogenesis
Hongzhao Chen, Minfeng Yang and Jung Sun Yoo
6. Dynamic Hyperparameter Integration for Medical Image Registration
Peilin Wang, Jing Cai and Tian Li

7. From Contaminated Soils to Urban Communities: Tracing the Cryptic Transmission Routes of *Burkholderia pseudomallei* ST-1996 in an Expanding Urban Melioidosis Hotspot
Tak Fai Wong, Wang Ngai Franklin Chow and Kit Hang Gilman Siu
8. Explainable Machine Learning-based Pulmonary Embolism Diagnosis via Texture Analysis
Zihan Li, Yu-Hua Huang, Zhi Chen, Mayang Zhao, Yao Pu, Jing Cai and Ge Ren
9. Genome-wide association studies and Mendelian randomization analyses provide insights into the relationship between branched-chain amino acids metabolism and type 2 diabetes risk
Xiangyu Zhou, Kenneth Cheng and Gloria Li
10. Exploring the Triad of Cerebrovascular Reactivity, Intracranial Atherosclerosis, and Small Vessel Disease: A Pathway to Understanding Cognitive Decline in Ageing
Joseph A. Ackah
11. Leveraging Segment Anything Model for Lymph Node Segmentation: A Semi-Supervised Approach
Jingguo Qu, Xinyang Han and Tin Cheung Michael Ying
12. Medical Image Translation from CT to SPECT via Cycle-GAN for Lung Disease Diagnosis
Yao Pu, Mayang Zhao, Zihan Li, Jing Cai and Ge Ren
13. Lived experiences of older adults with chronic low back pain and implications on their daily life: a metasynthesis of qualitative research
Ka Ching Cheung and Yu Lok Wong
14. Effectiveness of a telecare-based intervention programme in supporting informal caregivers of community-dwelling older adults in reducing stress levels: a randomized controlled trial
Nga Ping Ng and Kwan Ching Wong
15. Evaluation for Applying Traditional Chinese Medicine Large Language Models in Hong Kong's Primary Healthcare: A Mixed-Methods Study Protocol
Shuya Lu, Jiqiao Lu, Yini Lai, Janice Ho, Joyce Chung and Lin Yang
16. Perception of Salutogenic Capacity of Voice-Activated Intelligent Personal Assistant among People with Parkinson's Diseases: A Qualitative Study
Terence Lau and Angela Yee Man Leung
17. Disempowerment among Adults with Chronic Illness: A Concept Analysis
Hau Yi Jodie Tse, Daphne Sze Ki Cheung, Engle Angela Chan and Grace Wing Ka Ho
18. Explore the lived childbirth experiences, challenges following childbirth, and coping strategies of teenage mothers: A qualitative meta-synthesis
Lebeza Tenaw, Fei Ngai and Katherine Lam
19. A Scoping Review on Motor Imagery to Improve Cognitive Function and Depression among Adults with Neurological Disorders or Mobility Impairments
Yule Hu, Yan Li, Jiaying Li, Xiaoxiao Mei, Jed Montayre, Janelle Yorke and Angela Leung
20. The effects of laughter yoga on adults' physical, psychological and social well-being: a scoping review.
Chung Yan Lam, Sau Fong Leung, Joyce Oi Kwan Chung and Daniel Bressington

21. Older adults' perceptions and acceptability toward the use of Artificial Intelligence (AI)-based health technologies: A qualitative study
Hiu Toon Jessica Lee and Kwan Ching Arkers Wong
22. Effectiveness of cognitive-based interventions on psychological distress in adolescents with physical disabilities: A systematic review and meta-analysis
Jiaying Li, Yan Li, Xiaoxiao Mei, Honggu He, Lu Yu, Grace Wing Ka Ho and Engle Angela Chan
23. Salutogenesis voice from prediabetes population: rethinking about health resources of comprehensibility, manageability and meaningfulness
Yaqian Liu, Jed Montayre, Yaqi Huang, Yong Zhao, Lilian Hung and Angela Leung
24. Tear metabolome from patients with diabetic retinopathy using chemical isotope labeling liquid chromatography-mass spectrometry (CIL LC-MS)
Yuhan Yang and Lei Zhou
25. Association of L/M cone amplitude ratios and myopia in human adults
Nandini Ravi and Henry Chan

Friday, 30 August 2024 | 15:10 – 16:25

Session S14: Advanced Machine Learning Techniques and Applications 2

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Zhengtong Li and Xi Shen

1. Multi-camera Tracking Methodology Using Re-Identification Model for Monitoring Fire Evacuation Safety
Yifei Ding, Yuxin Zhang and Xinyan Huang
2. A Carbon-Billed Future: A review for carbon market connected virtual power plant
Guotao Wang, Lin Zhenjia and Jinyue Yan
3. The α -reliable mean-excess shortest path in stochastic networks
Zhengyang Li, Zhong Zhou and Anthony Chen
4. An alternative approach in Physics-Informed Neural Networks (PINN) modelling of water hammer in a single pipeline for addressing the order of magnitude-induced inaccuracies
Vincent Tjuatja, Alireza Keramat and Huan Feng Duan
5. Gross Primary Productivity is More Sensitive to Accelerated Flash Droughts
Yangyang Jing, Shuo Wang, Pak Wai Chan and Zong-Liang Yang
6. A High-Definition Map Generation with Traffic Signs based on LiDAR-Visual-IMU Fusion SLAM Method
Qijun Qin, Weisong Wen and Li-Ta Hsu
7. Joint Optimization of Airport Slot Allocation and Gate Assignment: A Stochastic Integer Programming Approach
Xuanji Long and Wei Liu
8. NeuV-SLAM: Fast Neural Multiresolution Voxel Optimization for RGBD Dense SLAM
Wenzhi Guo, Bing Wang and Lijun Chen

9. Entity Alignment with Noisy Annotations from Large Language Models
Shengyuan Chen and Xiao Huang
10. Source Prompt Disentangled Inversion for Boosting Image Editability with Diffusion Models
Ruibin Li
11. Diffusion-Driven Domain Adaptation for Generating 3D Molecules
Haokai Hong, Wanyu Lin, Ming Yang and Kay Chen Tan
12. Node-aware Bi-smoothing: Certified Robustness against Graph Injection Attacks
Yuni Lai, Yulin Zhu, Bailin Pan and Kai Zhou
13. Probabilistic Building Load Forecasting via Conditional Diffusion Model
Rui Liang, Yang Deng and Dan Wang
14. 3D Style Transfer Based on Pretrained Diffusion Models
Yunchen Yuan
15. Effective Illicit Account Detection on Large Cryptocurrency MultiGraphs
Zhihao Ding, Jieming Shi, Qing Li and Jiannong Cao
16. Personalized route designing and decision making for autonomous vehicles
Yijia Chen
17. Applying Evolutionary Game Theory to Analyze Autonomous Bus Control System Algorithms
Zhanpeng Feng, Hailong Huang and Chao Huang
18. Proactive Approach to Aircraft Maintenance Task Scheduling: Enhancing Operational Resilience in Airline Operations
Zimu Guo and Xin Wen
19. Pricing and revenue allocation mechanisms for regional logistics networks in Cyber-Physical Internet
Shulin He, Mengdi Zhang, Shuaian Wang and George Q. Huang
20. Achieving bubble self-pumping through a dual-layer flow field design
Lizhen Wu and Liang An
21. Complexity of a quantum manifold regularized-Newton method
Zexian Li, Hua Xiang, Minru Bai and Guofeng Zhang
22. Financial Fraud Detection based on Topic Model
Li Jiatong
23. Non-convergence Analysis of Probabilistic Direct Search
Cunxin Huang and Zaikun Zhang
24. Image Segmentation for Commercial Painting Application
Shafayet Yaseen

Friday, 30 August 2024 | 15:10 – 16:25

Session S15: Advanced Machine Learning Techniques and Applications 3

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Hung-lin Chi and Jihao Shi

1. Hierarchical Bayesian Model Updating and Structural Condition Assessment of Long-span Bridges Considering Operational Uncertainties
Lanxin Luo, Mingming Song, Limin Sun and Yong Xia
2. rLSTM for Metamodeling of Stochastic Dynamic Systems and its Application to Reliability Analysis
Yu Zhang and You Dong
3. Modelling wave scattering around a surface-piercing cylinder using a spectral boundary integral method
Daimeng Shang and Qianyu Chen
4. Optimizing bus bridging services in response to metro disruptions under uncertainties
Min Yan and Wei Liu
5. Control performance analysis of integrator feedback system with saturation
Jiangcheng Su, Hailong Huang and Hao Cao
6. How Position Choosing in The Calculation of Lifting Line Theory Affects the Accuracy of Its Results
Haoyang Yu
7. Revolutionizing LoRa Gateway with XGate: Scalable Concurrent Transmission across Massive Logical Channels
Shiming Yu, Xianjin Xia, Ningning Hou, Yuanqing Zheng and Tao Gu
8. EasyGen: Easing Multimodal Generation with BiDiffuser and LLMs
Xiangyu Zhao, Bo Liu, Qijiong Liu, Guangyuan Shi and Xiao-Ming Wu
9. Ormer: Robust and Gas Efficient Blockchain Oracle
Dongbin Bai and Jiannong Cao
10. C2KD: Bridging the Modality Gap for Cross-Modal Knowledge Distillation
Fushuo Huo, Wenchao Xu and Jingcai Guo
11. Graph Anomaly Detection at Group Level: A Topology Pattern Enhanced Unsupervised Approach
Xing Ai, Jialong Zhou, Yulin Zhu, Gaolei Li, Tomasz Michalak, Xiapu Luo and Kai Zhou
12. Optimizing Wireless Communication for Fire Evacuation: A Systematic Approach Using UAV-Assisted Real-time Sensing for Emergency Response Efficiencies
Zewen Pan, Dominicus Dylan Haryoto and Qixin Wang
13. Autonomous Driving System combined with Edge Computing
Meijia Wu
14. A Robot Scene Perception Method Based on Incremental Brain-Like Developmental Framework
Hanqian Luo and Jiannong Cao

15. Efficient and Atomic Cross-blockchain Transaction Processing for Decentralized Web3 Applications
Yuqin Wang and Jiannong Cao
16. Maximizing the Benefits: A Game Theoretic Scheduling for Decentralized Group Competition Mobile Edge Computing Framework
Qian Zhou, Jiannong Cao, Mingjin Zhang and Xiangchun Chen
17. Constructing Multi-Modal Knowledge Graphs for College Courses with Large Language Models
Ruiqi Chen
18. Achieving single-core equivalence in a multi-core system on QEMU with Client-Server Architecture
Zhe Xiao
19. A feasibility study of distinguishing older fallers from older non-fallers by computer vision
Zhuoning Xu
20. Airline cabin crew scheduling by considering crew satisfaction
Lingrui Liu and Xin Wen
21. Non-Prehensile Tool-Object Manipulation by Integrating LLM-Based Planning and Manoeuvrability-Driven Controls
Hoi Yin Lee, Peng Zhou, Wanyu Ma, Anqing Duan, Chenguang Yang and David Navarro-Alarcon
22. Robust Factor Analysis Based on Huber Loss Function
Lingxiao Li, Matteo Barigozzi and Yong He
23. Convergence of ALE Interface Tracking Methods for Fluid-Structure Interaction with a Moving Interface
Buyang Li, Qiqi Rao and Pengtao Sun
24. Blockwise Direct Search Methods
Haitian Li

Friday, 30 August 2024 | 16:35 – 17:45

Session S16: Functional Materials and Devices for Biomedical Applications

Room: Garden Room A, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Zhongping Yao and Daisy Zhao

1. Environmentally aged micro-plastic impacts in immune system via inducing inflammatory factors in early development zebra fish
Xin Wu
2. Nanobubble-actuated ultrasound neuromodulation for selectively shaping behavior in mice
Jianing Jing and Lei Sun
3. Role of the Endothelin/Endothelin Receptor Axis in Osteoarthritis
Jaouhara El Makhloufi, Xavier Houard, Man Ting Au, Samia Bahieddine, Kristell Wanherdrick and Chunyi Wen
4. An Enhanced Loss Function for Medical Semantic Segmentation
Minxin Chen, Duo Wai-Chi Wong and James Chung-Wai Cheung

5. Modulation of insulin release by non-invasive ultrasound for diabetes treatment
Xinyi Zhao, Yong Wu, Jinghui Guo, Yizhou Jiang and Lei Sun
6. An Adaptive Spatiotemporal Filter for Ultrasound Localization Microscopy Based on Density Canopy Clustering
Yu Qiang, Weibao Qiu and Sun Lei
7. Development of inhibitory interneuron specific sonogenetics and its application in mitigating neurodegenerative disease
Dongshuai Zhao and Lei Sun
8. Magnetically-driven and Proprioceptive Smart Diaphragm towards Future Invasive Cardiovascular Assistance
Keyu Yao, James Chung-Wai Cheung, Hyo Jung Lim and Duo Wong
9. Training-Free Few-Shot Medical Image Segmentation with Segment Anything Model
Nanxi Yu and Shujun Wang
10. Applications of Biological Field-Effect Transistor in Peritoneal Dialysis: A Comprehensive Review
Quan Wang and Chung Wai James Cheung
11. Mechanosensitive protein-mediated sonogenetics
Yong Wu
12. Efficient Chemical Strategy to Construct Macrophage-Engaging Peptidic Bispecific Antibody for Immunotherapy
Chihao Shao
13. Therapeutic efficacy of Glypican-3 peptide-link Chimeric Antigen Receptor (CAR)-Macrophage in HCC
Wing Hei Leung, Oi Ning Leung, Tsun Ting Wong and Kin Wah Lee
14. Homeothermal anchoring of L-arginine/Ca²⁺/Nitric oxide shape memory bone screws propagate mechanical stimulation, energize bone cells and augment bone regeneration
Huaqian Liu and Xin Zhao
15. Generation of a NFAT5-GFP fusion protein using CRISPR/Cas9-mediated gene knock-in strategy to understand the regulation of NFAT5 biomolecular condensate
Kai Yuan
16. Chemical Modification of Cytochrome C for Acid-Responsive Intracellular Apoptotic Protein Delivery for Cancer Eradication
Bo Tang
17. Lubricating osteochondral scaffold for instructed anti-inflammatory healing
Ho Pan Bei and Xin Zhao
18. Microcurvature landscapes induce neural stem cell polarity and enhance neural differentiation
Ho Yin Yuen
19. Copper(II) Ion-assisted Analysis of Anti-seizure Drug Fenfluramine Using Tandem Mass Spectrometry
Zhu Yuejia

20. Attomolar-level detection of respiratory virus long-chain oligonucleotides based on FRET biosensor with upconversion nanoparticles and Au-Au dimer
Yingjin Ma, Jianhua Hao and Menglin Song
21. Hong Kong Healthspan Project
Yunan Chen and Lai Ling Hui
22. Simulated digestion and gut microbial fermentation of *Cordyceps sinensis* polysaccharides and effects on intestinal barrier
Fangting Gu, Zichen Zhao and Jianyong Wu

Friday, 30 August 2024 | 16:35 – 17:45

Session S17: Advanced Materials for Interdisciplinary Applications

Room: Garden Room B, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Yun Chang and Welson Wen

1. A New Bi-Static Window with Spectral Regulation of Liquid Paraffin and a Novel Biomass Dyes
Jihong Pu and Lin Lu
2. Non-invasive targeted vector delivery for sonogenetics
Danni Li, Quanxiang Xian and Lei Sun
3. SSDM: Towards Semi-Supervised Diffusion Models for Medical Image Segmentation
Ye Du, Guangqian Yang and Shujun Wang
4. Investigation of Nano-Surface Controlling of constant feed rate in end-flycutting
Jianpeng Wang
5. Non-sacrificial additive regulated electrode-electrolyte interface enables long-life, deeply rechargeable aqueous Zn anodes
Ang Li, Xinyu Zhang, Zeyu Xu and Maochun Wu
6. Energy harvesting in tandem inverted piezohydroelastic flag with resistor–inductor–capacitor circuit
Yao Yao
7. Novel organic compounds for highly efficient conversion-based energy storage in zinc battery
Xianhong Chen and Wai-Yeung Wong
8. Enhancing Drug Discovery: FOMO's Innovative Approach to Fragment-based Molecule Optimization
Zeqi Zhang and Cong Ma
9. Analysis of Neural Activity in Different Brain Regions Involved in Antidepressant Response of Physical Exercise
Zonghao Ma, Tong Cheng and Suk Yu Yau
10. The Effects of SARS-CoV-2 Spike Protein and *Pseudomonas aeruginosa* Co-infection Against Human Lung Fibroblasts
Minxi Li and Songlin Chua
11. Data Storage with Proteins
Yin Zhou, Cheuk Chi A. Ng, Chengxi Liu, Wai Man Tam, Francis C. M. Lau and Zhongping Yao

12. Role of SARS-Cov-2 Spike Protein in Promoting Secondary Infection by *Pseudomonas aeruginosa* Biofilms
Zihao Chen and Song-Lin Chua
13. Tailoring Multicontrolled Supramolecular Assemblies of Stiff-Stilbene Amphiphiles into Macroscopic Soft Scaffolds as Cell-Material Interfaces
Leong-Hung Cheung, Jeffrey C. To, Wai-Ki Wong, Takashi Kajitani, Vincent W. Keng and Franco King-Chi Leung
14. Elucidation of Exceptional Responder Gene-Drug Sensitivity in Cancers
Junyuan Zhu
15. Development of bacterial transcription antitermination inhibitors as novel antimicrobial agents
Sin-Yu Ke and Cong Ma
16. Personalized Music Alleviates Anxiety Symptoms in College Students Based on EEG Data
Qianwen Luo, Yifan Wang, Kairui Yang, Hao Zhang, Aironq Qian, Wenjuan Zhang and Gong Chen
17. Designing Electrolytes with Steric Hindrance and Film-Forming Booster for High-Voltage Potassium Metal Batteries
Zhenlu Yu and Biao Zhang
18. Ternary Chalcogenide GeSeTe: An Emerging low-dimensional Material for Nonlinear Optics and Ultrafast Photonics
Sumaiya Umme Hani, Tawsif Ibne Alam and Yuen Hong Tsang
19. Evaluation of Three-Phase Partitioning for Efficient and Simultaneous Isolation of Immunomodulatory Polysaccharides and Proteins from *Lentinula Edodes* Mushroom
Zichen Zhao, Fangting Gu and Jianyong Wu

Friday, 30 August 2024 | 16:35 – 17:45

Session S18: Interdisciplinary Science and Applications

Room: Garden Room D, 2/F, New World Millennium Hong Kong Hotel

Session Co-Chairs: Hangxin Li and Dadi Zhang

1. The Comorbidity Mechanism of Internet Gaming Disorder and Depression among Adolescents: A Longitudinal Cross-lagged Panel Network Analysis
Shiyun Chen, Yue Zhao, Xinli Chi and Shimin Zhu
2. Testosterone administration increases sensitivity to social evaluation during dynamic updating of state self-esteem in healthy males: A computational modeling approach
Jixin Long and Yin Wu
3. A Feasibility Trial of Digital Game Intervention in Chinese Children Vulnerable to ADHD
Yuhan Guo
4. Parental Warmth, Family Resilience, and Mental Health among Chinese Parent-Child Dyads: An Actor-Partner Interdependence Model
Yaoxiang Ren and Lu Yu
5. Motion-Robust Sequence Optimization for 4D-Magnetic Resonance Fingerprinting
Xiang Wang, Peng Cao, Jing Cai and Tian Li

6. Application Practice of 'Active Opening' Strategy in Modern High-Rise Buildings
Tianwei Chu, Wenxin Zeng and Liming Jiang
7. Welcome to the night: Nighttime amenities, travel to consume, and urban economic spillover
Ying Fan, Ming Chen, Wang Chen and Jintao Ke
8. Impact of Rutting on Traffic Safety
Ali Fares, Man Nok Wong, Nour Faris and Tarek Zayed
9. A Prospective Cross-border Transport Infrastructure: Effects of the China-Nepal Railway on Regional Development
Angxi Xie
10. Assessing the Role of High-Speed Rail in Enhancing Urban Economic Complexity
Mingming Guan and Yuting Hou
11. Granite's Strength Alterations in Elevated Temperatures for Underground Infrastructures in Hong Kong
Mohammadreza Akbariforouz, Qi Zhao and Alessandro Stocchino
12. Experimental investigation on the influence of effective embedment depth in reusable interlocking hold-down type column base connections
Aswin Kumar Jeyabalan, Sivaganesh Selvaraj and Tak-Ming Chan
13. Resource allocation in air-rail-integrated co-modality under both demand and supply uncertainties
Xinyi Zhu and Wei Liu
14. High-speed rail capacity allocation and pricing under passengers' access time uncertainty: Flexible ticket or reserved seat?
Yuzhen Feng and Wei Liu
15. Intention-based Autonomous Feeding for Assistive Robots with Time Series Face Detection
Xuan Zhang, Guanzhong Zhou and Hailong Huang
16. Coordinated delivery riders and drones for food delivery
Mingzhi Lyu and Wei Liu
17. Air Cargo Demand Allocation to Passenger Airlines Considering Uncertainty
Yufan Zuo and Wei Liu
18. Development of Sim-to-Real Software Environment to Control the Motion of a Humanoid Robot
Jiawen Fu
19. Design and Implementation of an Intelligent Trash Collection Robot with Speech Recognition, Dynamic Control, and YOLO Object Detection
Xianzhe Chen, Zian Wang, Hengyu Wu, Hailong Huang and Guanzhong Zhou
20. Intelligent Robotic Painting System
Muntaha Noor Orpa

21. Blue-Light Controlled Supramolecular Soft Robotics of Phenylazothiazole Amphiphiles for Rapid Macroscopic Actuations
Ming Hin Chau, Wai Ki Wong, Takashi Kajitani and Franco King-Chi Leung
22. Global Economic and Environmental Threats of Fire Activity
Qing Yamin and Wang Shuo